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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,664	01/02/2001	Hiroshi Fukumoto	201081US3	7591

22850            7590            03/04/2003

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EXAMINER

KIM, CHRISTOPHER S

ART UNIT	PAPER NUMBER
3752	

DATE MAILED: 03/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/750,664	FUKUMOTO ET AL.	
<b>Period for Reply</b>	Examiner	Art Unit	
	Christopher S. Kim	3752	
<i>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</i>			
<b>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.</b>			
<ul style="list-style-type: none"> <li>- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>			
<b>Status</b>			
1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>26 February 2003</u> .			
2a) <input checked="" type="checkbox"/> This action is FINAL.                    2b) <input type="checkbox"/> This action is non-final.			
3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.			
<b>Disposition of Claims</b>			
4) <input checked="" type="checkbox"/> Claim(s) <u>1-3, 17 and 18</u> is/are pending in the application.			
4a) Of the above claim(s) <u>17 and 18</u> is/are withdrawn from consideration.			
5) <input type="checkbox"/> Claim(s) _____ is/are allowed.			
6) <input checked="" type="checkbox"/> Claim(s) <u>1-3</u> is/are rejected.			
7) <input type="checkbox"/> Claim(s) _____ is/are objected to.			
8) <input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement.			
<b>Application Papers</b>			
9) <input type="checkbox"/> The specification is objected to by the Examiner.			
10) <input type="checkbox"/> The drawing(s) filed on _____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner.			
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).			
11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved by the Examiner.			
If approved, corrected drawings are required in reply to this Office action.			
12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.			
<b>Priority under 35 U.S.C. §§ 119 and 120</b>			
13) <input checked="" type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).			
a) <input checked="" type="checkbox"/> All b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of:			
1. <input checked="" type="checkbox"/> Certified copies of the priority documents have been received.			
2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____.			
3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).			
* See the attached detailed Office action for a list of the certified copies not received.			
14) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).			
a) <input type="checkbox"/> The translation of the foreign language provisional application has been received.			
15) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.			
<b>Attachment(s)</b>			
1) <input type="checkbox"/> Notice of References Cited (PTO-892)		4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____	
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)		5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)	
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____		6) <input type="checkbox"/> Other: _____	

## DETAILED ACTION

### ***Response to Amendment***

1. Amendment filed February 26, 2003 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

3. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim 1 recites "a field applier forming an equipotential surface" in line 4. The "field applier" appears to be in reference to the DC voltage source 5. If so, what is the "equipotential surface"? If the "equipotential surface" is in reference to the conductive nozzle plate 3, the "field applier forming an equipotential surface" appears to be a double inclusion of the "liquid holder" recited in line 2.

Claim 2 recites "a conductive nozzle plate" in line 2. It appears to be a double inclusion of the "liquid holder" recited in line 2.

Claim 3 recites "a concave portion" in line 2. It appears to be a double inclusion of the "equipotential surface convexed with respect to the liquid surface" recited in claim 1, lines 4-5.

***Claim Rejections - 35 USC § 102***

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Hochberg, deceased et al. (4,046,074).

Hochberg et al. discloses a liquid sprayer comprising: a liquid holder 30; a field applier 40, 42; a conductive nozzle plate 30; a first opening 44; a second opening (concave portion of 30); an object 12.

***Response to Arguments***

5. Applicant's arguments filed February 26, 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that claim 1 is not indefinite because it merely cover plural embodiments, examiner acknowledges applicant's assertion that claim 1 is a generic claim. Based on applicants assertion and the disclosure of elected Species A, figure 1, the liquid holder makes up part of the field applier. Therefore, reciting a double inclusion of the liquid holder and rendering the claim indefinite. If it is not a double inclusion of elements (the liquid holder), the claim does not read on elected Species A and only reads on a non-elected species having a liquid holder which is separate from (and not part of) the field applier.

In response to applicant's argument that Hochberg does not a field applier forming an equipotential surface convexed with respect to the liquid surface, the concaved surface, as shown in figure 2A, over the printed letters, forms an equipotential surface convexed with respect to the liquid surface. Equipotential is defined as:

1. Having equal potential.
2. Physics. Having the same electric potential at every point.

The American Heritage® Dictionary of the English Language, Third Edition copyright © 1992 by Houghton Mifflin Company.

The claim recitation has been broadly considered to describe a surface which is convexed with respect to the liquid surface and having equal potential. It has not been considered to be limited to the specification and the drawing that describes and shows, respectively, the circuitry of figure 1.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (703) 308-8336. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Y. Mar can be reached on (703) 308-2087. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



Christopher S. Kim  
Examiner  
Art Unit 3752

CK  
February 28, 2003